

Honeywell

Product Range Guide

**Limit Switches
and Machine
Safety**

For innovation that's well apart, there's only Honeywell

With more than 50,000 products ranging from snap-action, limit, toggle, and pressure switches to position, speed, pressure, and airflow sensors, Honeywell has one of the broadest sensing and switching portfolios.

Honeywell sensor, switch, and control components are tailored to exact specifications for stronger performance, longer productivity, and increased safety. Enhanced accuracy and durability are built into every part, improving output and endurance. For our customers, this can reduce expenditures and operational costs. Our global footprint and channels help to competitively price such components for your chosen application and provide immediate technical support.

While Honeywell's switch and sensor solutions are suitable for a wide array of basic and complex applications, our custom-engineered solutions offer enhanced precision, repeatability, and ruggedness. We offer domain knowledge and technology resources, along with a close working relationship, to develop and deliver cost-effective, individually tailored solutions. Whether clean-slate development or simple modifications to an existing design are needed, our expertly engineered solutions help to meet the most stringent requirements with world-class product designs, technology integration, and customer-specific manufacturing.

Global service, sourcing, and manufacturing. Industry-leading engineers. Value-added assemblies and solutions. A one-stop, full-service, globally competitive supplier.



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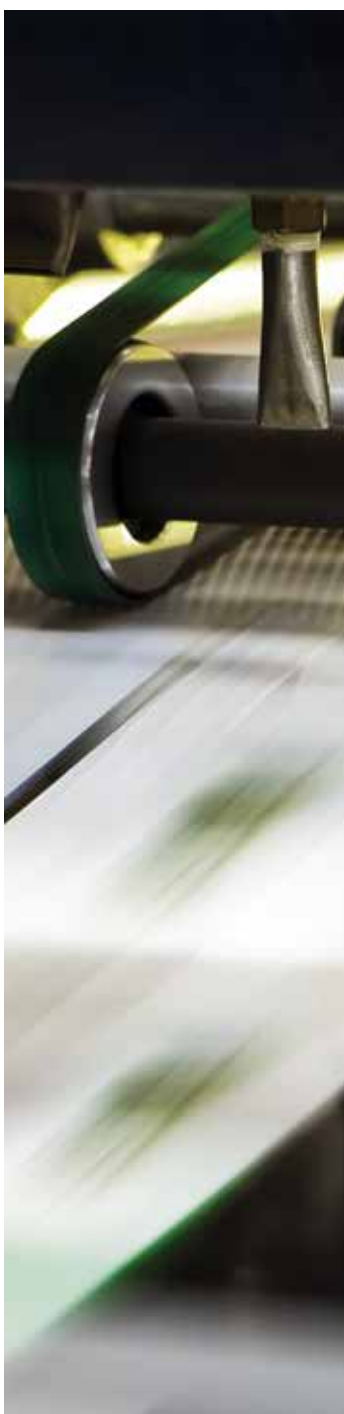
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MICRO SWITCH Limit Switches | Heavy-Duty Limit Switches

Offer a rugged, die-cast body with multiple mounting and actuator options. Low- and high-temp construction and factory-sealed, pre-wired versions available. Potential applications include food and beverage, construction and agriculture equipment, material handling, rail, industrial valves, chemical and food processing, shipboard, caustic waste handling, and power generation.





| HDLS Series | Standard | 316L Stainless Steel | Fully Potted, Epoxy Sealed |
|--|--|--|--|
| Housing type | HDLS plug-in and non-plug-in | 316L stainless steel non plug-in | sealed HDLS body |
| Sealing | IP65/66/67; NEMA 1, 3, 4, 4X, 6, 6P, 12, 13 | IP65/66/67; NEMA 1, 3, 3R, 4, 4X, 6, 6P, 12, 13 | IP65/66/67; NEMA 1, 3, 4, 6, 6P, 12, 13 |
| Temperature range (standard) | -12 °C to 121 °C [10 °F to 250 °F] | -12 °C to 121 °C [10 °F to 250 °F] | -12 °C to 121 °C [10 °F to 250 °F] |
| Low temperature range (optional) | -40 °C to 121 °C [-40 °F to 250 °F] | -40 °C to 121 °C [-40 °F to 250 °F] | -40 °C to 121 °C [-40 °F to 250 °F] |
| Housing material | zinc die-cast w/ epoxy coating | stainless steel | zinc die-cast w/ epoxy coating |
| Actuators/levers | <ul style="list-style-type: none"> • top pin plunger • top pin plunger, adjustable • top roller plunger • top rotary • side rotary • side rotary (maintained) • side pin plunger • side pin plunger, adjustable • side pin plunger, maintained • side roller plunger • wobble | <ul style="list-style-type: none"> • top pin plunger • top roller plunger • side rotary • side rotary (maintained) • side pin plunger • side roller plunger | <ul style="list-style-type: none"> • top pin plunger • top pin plunger, adjustable • top roller plunger • top rotary • side rotary • side rotary (maintained) • side pin plunger • side pin plunger, adjustable • side pin plunger, maintained • side roller plunger • wobble |
| Termination | <ul style="list-style-type: none"> • 0.5 in/0.75 in-14NPT conduit • 20 mm conduit • PG13.5 • 6-ft and 12-ft cable • manifold • 4, 5, and 9-pin mini-connector • 4-pin micro-connector | <ul style="list-style-type: none"> • 0.5 in/0.75 in-14NPT conduit • 12-ft cable | <ul style="list-style-type: none"> • cable (various lengths) • 4, 5, and 9-pin mini-connector |
| Approvals | UL, CE, CSA, CCC, EN60947-1, EN60947-5-1 | UL, CE, CSA, CCC, EN60947-1, EN60947-5-1 | UL, CE, CSA, CCC, EN60947-1, EN60947-5-1 |
| Circuitry (double break contacts) | <ul style="list-style-type: none"> • 1NC 1NO SPDT, snap action • 1NC direct acting, • 2NC 2NO DPDT, snap action • 2NC 2NO DPDT sequential, snap action • 2NC 2NO DPDT center neutral, snap action | <ul style="list-style-type: none"> • 1NC 1NO SPDT, snap action • 1NC direct acting, • 2NC 2NO DPDT, snap action • 2NC 2NO DPDT sequential, snap action • 2NC 2NO DPDT center neutral, snap action | <ul style="list-style-type: none"> • 1NC 1NO SPDT, snap action • 1NC direct acting, • 2NC 2NO DPDT, snap action • 2NC 2NO DPDT sequential, snap action • 2NC 2NO DPDT center neutral, snap action |
| Contacts | silver, gold | silver, gold | silver, gold |
| Electrical rating | 10 A (thermal) AC15, A600; DC13, R300 | 10 A (thermal) AC15, A600; DC13, R300 | 10 A (thermal) AC15, A600; DC13, R300 |
| Measurements (H x W x D) | 106,7 mm x 41,1 mm x 44,4 mm [4.20 in x 1.62 in x 1.75 in] | 122,9 mm x 47,63 mm x 45,2 mm [4.84 in x 1.875 in x 1.78 in] | 106,7 mm x 41,1 mm x 44,4 mm [4.20 in x 1.62 in x 1.75 in] |
| Features | wide variety of actuators, circuitry options, and connectivity; rugged and dependable, models in service for over 40 years | series 316L 300 stainless steel housing suitable for corrosive environment and wash down food and beverage applications | construction guards against fluid penetration into switch body; suitable for harsh-duty applications |



MICRO SWITCH Limit Switches | Global Limit Switches



Meet IEC standards for world-wide acceptance – often used in injection molding, PLC interface, machine tooling, escalators, packaging, food and beverage, industrial, lifts and elevators, electronic assembly, construction and agriculture equipment, material handling, and rail.



| Series | GLA | GLC |
|--|---|---|
| Housing type | EN 50041 | EN 50047 |
| Sealing | IP67; NEMA 1, 3, 4, 12, 13 | IP66/IP67; NEMA 1, 4, 12, 13 |
| Temperature range | -25 °C to 85 °C [-13 °F to 185 °F] side rotary: -40 °C to 85 °C [-40 °F to 185 °F] | -40 °C to 85 °C [-40 °F to 185 °F] |
| Housing material | zinc die-cast, epoxy coated | zinc die-cast, epoxy coated |
| Actuators/levers | side rotary, top pin plunger, top roller lever, top roller plunger, wobble | side rotary, top pin plunger, top roller lever, top roller plunger, wobble |
| Termination | conduit: 0.5 in - 14NPT, 20 mm, PG13.5 | conduit: 0.5 in - 14NPT, 20 mm, PG13.5, Deutsch-style connector (4-pin) |
| Approvals | UL, CE, CSA, CCC, IEC 947-5-1, EN60947-5-1, UL508 | UL, CE, CSA, CCC, IEC 947-5-1, EN60947-5-1, UL508 |
| Circuitry (double break contacts) | <ul style="list-style-type: none"> • SPDT snap action • SPDT slow action, BBM/MBB • DPDT snap action • DPDT sequential • DPDT center neutral • 2NO or 2NC | <ul style="list-style-type: none"> • SPDT snap action • SPDT slow action, BBM/MBB • 2NC slow action • 2NO slow action |
| Contacts | silver, gold | silver, gold |
| Electrical rating | 10 A (thermal) AC15, A600; DC13, Q300 | 10 A (thermal) AC15, A300; DC13, Q300 |
| Measurements (H x W x D) | 103 mm x 42,0 mm x 42,0 mm [4.06 in x 1.65 in x 1.65 in] | 85,6 mm x 30,5 mm x 31,1 mm [3.37 in x 1.20 in x 1.23 in] |
| Features | positive-opening NC contacts  | positive-opening NC contacts  |





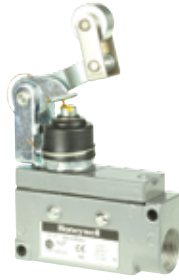
| GLD | GLE | SZL-VL |
|---|---|--|
| EN 50047 | EN 50047 compatible | - |
| IP66; NEMA 1, 4X (indoor), 12, 13 | IP66; NEMA 1, 4, 12, 13 | IP64 |
| -40 °C to 85 °C [-40 °F to 185 °F] | -40 °C to 85 °C [-40 °F to 185 °F] | -20 °C to 60 °C [-4 °F to 140 °F] |
| high-strength thermoplastic | zinc die-cast, epoxy coated | zinc die-cast/thermoplastic |
| side rotary, top pin plunger, top roller plunger, wobble | side rotary, top pin plunger, top roller plunger, wobble | side rotary, top pin plunger, top roller plunger, wobble, wobble cat whisker |
| conduit: 0.5 in - 14NPT, 20 mm, PG13.5, Deutsch-style connector (4-pin) | conduit: 0.5 in - 14NPT, 20 mm, PG13.5, Deutsch-style connector (4-pin) | cable gland (cable Ø 6 mm to Ø 9 mm) |
| UL, CE, CSA, CCC, IEC 60947-5-1, EN60947-5-1, UL508, UL746-C | UL, CE, CSA, CCC, IEC 60947-5-1, EN60947-5-1, UL508 | UL, cULus, CE |
| <ul style="list-style-type: none"> • 1NC 1NO SPDT snap action • 1NC 1NO SPDT slow action, BBM/MBB • 2NC • 2NO | <ul style="list-style-type: none"> • 1NC 1NO SPDT snap action • 1NC 1NO SPDT slow action, BBM/MBB • 2NC 2NO DPDT snap action • 2NC • 2NO | <ul style="list-style-type: none"> • 1NC 1NO SPDT |
| silver, gold | silver, gold | gold-plated silver |
| 10 A (thermal) AC15, A300; DC13, Q300 | 10 A (thermal) AC15, A300; DC13, Q300 | 5.0 A @ 250 Vac max. 0.4 A @ 125 Vdc max. |
| 84,05 mm x 30,5 mm x 32,6 mm [3.31 in x 1.20 in x 1.28 in] | 85,9 mm x 65 mm x 31,1 mm [3.38 in x 2.56 in x 1.23 in] | 82,5 mm x 28 mm x 25 mm [3.25 in x 1.102 in x 0.98 in] |
| positive-opening NC contacts  | positive-opening NC contacts  | integral cord grip; gold-plated silver contacts |

MICRO SWITCH Limit Switches | Medium-Duty Limit Switches

Featuring a small metal package size. Potential applications include material handling, printing, machine tools, agricultural equipment, cranes, packaging, earth moving, conveyors, surtran, textile, and printing.



| Series | 14CE/914CE | LS/LS-4 |
|---------------------------------|---|---|
| Housing type | miniature | compact/non-plug-in, plug-in |
| Sealing | IP65, IP66, IP67; IP68 NEMA 1, 3, 3R, 4, 6, 6P, 12 (boot seal), 13 | NEMA 1, 3, 4, 6, 13 |
| Temperature range | 0 °C to 70 °C [35 °F to 158 °F] -40 °C [-40 °F] low temp (optional) | -29 °C to 71 °C [-20 °F to 160 °F] -29 °C to 120 °C [-20 °F to 298 °F] (optional) |
| Housing material | zinc die-cast, epoxy coated | zinc die-cast/aluminum die cast epoxy coated |
| Actuators/levers | side rotary, top pin plunger, top roller plunger, pushbutton, wobble, panel mount | side rotary, side rotary (maintained), top pin plunger, top roller plunger, side roller plunger, side roller, wobble |
| Termination | cable, micro-connector | conduit: 0.5 in - 14NPT, 20 mm, PG13.5 |
| Approvals | 14CE: CE, IEC947-5-1, EN60947-5-1 914CE: UL, CE, CSA, IEC947-5-1, EN60947-5-1 | LS: UL, CSA (select listings) LS-4: CE (select listings) |
| Circuitry | SPDT | SPDT double break, DPDT double break |
| Contacts | silver, gold | silver |
| Electrical rating | 5 A (thermal) AC14, D300; DC13, R300 | LS: 10 A (125, 250 or 480 Vac) LS-4: AC15, A300; DC13, P300 |
| Measurements (H x W x D) | 49 mm x 40 mm x 16 mm [1.93 in x 1.58 in x 0.63 in] | 102,9 mm x 30,2 mm x 28,7 mm [4.05 in x 1.19 in x 1.13 in] |
| Features | rugged metal housing; miniature size; pre-leaded or various quick-connect terminations; low-temperature available | mode of operation is field adjustable; variety of operating characteristics; models in service for more than 60 years |



| E6/V6 | E7/V7 | SL1 |
|--|--|--|
| side mount, flange mount | side mount, flange mount | side mount |
| E6/V6-RQ: IP40; NEMA 1 E6/V6-RN: IP66; NEMA 1, 3, 4 | E7/V7-RQ: IP50 E7/V7-RN or RQN: IP65 | IP67; NEMA 3, 4, 13 |
| -32 °C to 71 °C [-25 °F to 160 °F] -40 °C [-40 °F] low temp (optional) | -30 °C to 70 °C [22 °F to 158 °F] | -10 °C to 70 °C [14 °F to 158 °F] |
| zinc die-cast, epoxy coated | aluminum die-cast, epoxy coated | zinc die-cast |
| top pin plunger, maint. with reset plunger, wobble, top roller lever, top roller plunger, cross roller plunger, one-way roller lever | top pin plunger, top roller plunger, top roller lever, one-way roller lever, wobble, cross-roller plunger | top pin plunger, top roller plunger, top cross roller plunger, top roller lever |
| 0.5 in - 14NPT (or NPSM) conduit, mini-connector, cable | 20 mm, PG13.5 single or double conduit | cable gland (cable diameter 5,8 mm to 9,6 mm) |
| UL, CSA, CE | CE | UL, CSA |
| SPDT, DPDT | SPDT, DPDT | SPDT |
| silver, gold | silver | silver, gold |
| 10 A, 15 A, 22 A @ 125, 250, or 480 Vac EN 60947-5-1; IEC 60947-5-1; AC15, B300 | SPDT: AC15, A300; DC13, Q300 DPDT: AC15, B300; DC13, R300 | 5 A |
| 63,5 mm x 25,4 mm x 77,2 mm [2.50 in x 1.00 in x 3.04 in] | single conduit: 45,3 mm x 76,4 mm x 25,4 mm [1.79 in x 3.01 in x 1.00 in] double conduit: 45,2 mm x 84,6 mm x 25,4 mm [1.78 in x 3.33 in x 1.00 in] | 59,8 mm x 44,2 mm x 18 mm [2.35 in x 1.74 in x 0.71 in] |
| rugged electrostatic, epoxy-coated housing; booted versions sealed to IP66; unsealed actuators sealed to IP40; side or flange mount; low temperature options; models in service for more than 60 years | compact, general-purpose limit switch for medium-duty indoor or outdoor applications | often ideal source for replacement parts for machine tools; rugged housing; snap-in terminal enclosures; standard and low temperature ranges |

MICRO SWITCH Hazardous Area Switches | Hazardous Area Switches

Designed to extinguish the flame path in a potentially explosive environment, MICRO SWITCH hazardous area switches are weatherproof, water-tight, and dust-tight. These highly reliable, rugged switches are often used in control valves, petrochemical, conveyors, grain elevators, and material handling.



| Series | EX | 14CE100 |
|----------------------------------|--|--|
| Approvals | UL, CSA, ATEX (CE), IEC Ex | ATEX (CE) |
| Designations | NEMA 7, Div. 1 & 2, Class I, Groups B, C, & D (select catalog listings) NEMA 9, Div. 1 & 2, Class II, Groups E, F, & G II 2 G; EEx d IIB + H2 T6 | II 2 G; Ex d IIC T6 II 2 D; Ex tD A21 T85°C |
| Sealing | NEMA 1 | IP65 IP66 (select catalog listings) |
| Housing material | aluminum, epoxy coated | zinc, epoxy coated |
| Actuators/levers | side rotary, top pin plunger, top roller plunger, manual | top pin plunger, top roller plunger, cross-roller plunger |
| Termination | 0.5 in - 14NPT conduit, lead wires | harmonised Cenelec cable (various lengths) |
| Circuitry | 1NC 1NO SPDT snap action; 1NC 1NO SPDT maintained; 2NC 2NO DPDT snap action | 1NC 1NO SPDT snap action |
| Operating temperature (standard) | -40 °C to 71 °C [-40 °F to 160 °F] -40 °C to 204 °C [-40 °F to 400 °F] optional EXHT catalog listing | 0 °C to 70 °C [32 °F to 158 °F] |
| Electrical rating | 1 A, 10 A, 15 A, 20 A | AC14, D300; DC13, R300 |
| Measurements (H x W x D) | 65,0 mm x 93,0 mm x 51,3 mm [2.56 in x 3.66 in x 2.02 in] | 49,0 mm x 40,0 mm x 16,0 mm [1.93 in x 1.57 in x 0.63 in] |
| Features | smallest metal housing intended for indoor applications; ample wiring space; mounts from any of four sides; used in temperature range of -40 °C to 71 °C [-40 °F to 160 °F]; global agency approvals | pre-wired versions; gang-mounting capability; cable length variations; simple two screw mounting; A-P and European approvals |





| GXA | GXE | CX | VPX |
|---|---|--|---|
| ATEX (CE) | ATEX (CE), IEC Ex EN 50041 mounting compatible | UL, CSA, ATEX (CE), IN METRO, IEC Ex (consult factory for applicable listings) | cULus, ATEX, IEC Ex, CE |
| II 2 G; EEx d IIC T6 II 2 D; Ex tD A21 T85°C | II 2 G; EEx d IIC T6 II 2 D; Ex tD A21 T85°C | NEMA 7, Div. 1 & 2, Class I, Groups B, C, & D (select catalog listings) NEMA 9, Div. 1 & 2, Class II, Groups E, F, & G II 2 G; Ex d IIC T6 II 2 D; Ex tD A21 T85°C | snap-action switches: II 2 G, II 2 D (ATEX Rating) Ex db IIC T6 Gb (Gas) Ex tb IIIC T85°C Db (Dust) Ta -40 °C to +50 °C (Switch Code 4A or 4B) Ta -40 °C to +60 °C (Switch Code 2A or 2B) proximity switches: II 1 G, II 1 D (ATEX Rating) Ex ia IIC T4 Ga (Gas) Ex ia IIIC T135°C Da (Dust) Ta -40 °C to 80 °C |
| IP66 | IP66 | IP66; NEMA 1, 3, 4, 4X, 6, 6P, 13 | IP66 per IEC 60079-0; IP67 per IEC 60529 (self-certified by Honeywell) NEMA 4, 4X, 6, and 13 per UL 50E |
| zinc, epoxy coated | zinc, epoxy coated | aluminum (epoxy coated), bronze | aluminum with protective paint finish |
| side rotary, top pin plunger, top roller plunger | side rotary, top pin plunger, top roller plunger | side rotary, pin plunger | indicator shafts: NAMUR, 1/4 in flats, Knurl |
| 5 m of harmonised Cenelec cable (three conductor) | 5 m of harmonised Cenelec cable (three conductor) | 0.75 in - 14 NPT conduit, 25 mm conduit | conduit: 1/2-14 NPT, 3/4-14 NPT, M20 x 1.5, M25 x 1.5 |
| 1NC 1NO SPDT snap action | 1NC 1NO SPDT snap action | max. of 6NC/6NO 4 mA to 20 mA; analog output | - |
| -20 °C to 75 °C [-4 °F to 167 °F] | -20 °C to 75 °C [-4 °F to 167 °F] | -25 °C to 85 °C [-13 °F to 185 °F] -40 °C to 85 °C [-40 °F to 185 °F] (optional) | 4 EM switches: -40 °C to 50 °C [-40 °F to 122 °F] 2 EM switches: -40 °C to 60 °C [-40 °F to 140 °F] Proximity switches: -40 °C to 80 °C [-40 °F to 176 °F] |
| AC15, 4 A, 250 V; DC13, 0.15 A, 250 V | AC15, 4 A, 250 V; DC13, 0.15 A, 250 V | 1 A, 10 A, 15 A, 20 A | snap-action switches: UL: 15 A 150 Vac 10 A 250 Vac 0.5 A 250 Vdc CE: 16 A 250 Vac 0.5 A 250 Vdc proximity switches: switch element function: NAMUR, NC Nominal voltage: 8.2 V Current cons. (On) ≤ 1 mA Current cons. (Off) ≥ 3 mA |
| 103 mm x 42,0 mm x 42,0 mm [4.06 in x 1.65 in x 1.65 in] | 85,9 mm x 65 mm x 30,0 mm [3.38 in x 2.56 in x 1,18 in] | short cover: 101,6 mm x 101,6 mm x 104 mm [4.00 in x 4.00 in x 4.09 in] standard cover: 101,6 mm x 101,6 mm x 145,0 mm [4.00 in x 4.00 in x 5.71 in] | 152,3 mm H x 140 mm W x 140 mm D [6.0 in H x 5.5 in W x 5.5 in D] ref. |
| EN 50041 mounting compatible; double-insulated switch element; snap-action basic switch; A-P and European approvals | EN 50047 mounting compatible; double-insulated switch element; snap-action basic switch; A-P and European approvals | operate point field adjustable; low temp seals; available models for on/off position switching or continuous analog output sensing; single or double pole, double-throw available; global agency approvals | valve position indicator; certified flame-proof, explosion-proof and intrinsically safe (optional); VPX with proximity switches carry an Intrinsically Safe (IS) rating; well suited for up to 500,000 actuation cycles; available in multiple indicator colors that is visible from all directions |

MICRO SWITCH Hazardous Area Switches | Hazardous Area Switches

Designed to extinguish the flame path in a potentially explosive environment, MICRO SWITCH hazardous area switches are weatherproof, water-tight, and dust-tight. These highly reliable, rugged switches are often used in control valves, petrochemical, conveyors, grain elevators, and material handling.



| Series | LSX | BX |
|--|--|--|
| Approvals | UL, CSA | BX (1/2 NPT or 3/4 NPT): UL, CSA, ATEX, IEC Ex, NEPSI (China) BX (20 mm): ATEX, IEC Ex, NEPSI (China), EAC (Russia), IN METRO (Brasil) |
| Designations | NEMA 7, Div. 1 & 2, Class I, Groups B, C, & D NEMA 9, Div. 1 & 2, Class II, Groups E, F, & G | NEMA 7, Div. 1 & 2, Class I, Groups B, C, & D NEMA 9, Div. 1 & 2, Class II, Groups E, F, & G II 2 G Ex d IIC T6 Gb II 2 D Ex tb IIIC T85°C Db |
| Sealing | IP67; NEMA 1, 3, 4, 6, 13 | P67; NEMA 1, 3, 4, 6, 13 |
| Housing material | aluminum, epoxy coated | aluminum, epoxy coated |
| Actuators/levers | side rotary, side rotary (maintained), side pin plunger, side pin plunger - adjustable, side roller plunger, top rotary, top pin plunger, top pin plunger - adjustable, top roller plunger, wobble | side rotary, side rotary (maintained), side pin plunger, side pin plunger - adjustable, side roller plunger, top rotary, top pin plunger, top pin plunger - adjustable, top roller plunger, wobble |
| Termination | 0.5 in - 14NPT conduit, 0.75 in - 14NPT conduit | 0.5 in - 14NPT conduit, 0.75 in - 14NPT conduit, 20 mm conduit |
| Circuitry (double break contacts) | <ul style="list-style-type: none"> 1NC 1NO SPDT snap action 2NC 2NO DPDT snap action 2NC 2NO DPDT snap action, center neutral 2NC 2NO DPDT snap action, sequential | <ul style="list-style-type: none"> 1NC 1NO SPDT snap action 2NC 2NO DPDT snap action 2NC 2NO DPDT snap action, center neutral 2NC 2NO DPDT snap action, sequential |
| Operating temperature | -12 °C to 121 °C [10 °F to 250 °F] -40 °C to 121 °C [-40 °F to 250 °F] (optional) | -40 °C to 70 °C [-40 °F to 158 °F] |
| Electrical rating | 10 A (thermal) AC15, A600; DC13, R300 | 10 A (thermal) AC15, A600; DC13, R300 |
| Measurements (H x W x D) | 146,1 mm x 76,2 mm x 72,9 mm] [5.75 in x 3.00 in x 2.87 in] | 146,1 mm x 76,2 mm x 72,9 mm] [5.75 in x 3.00 in x 2.87 in] |
| Features | 10 A thermal electrical rating; variety of actuators and circuitry options; silver or gold contacts; field adjustable to meet various application needs | diverse conduit selection; compatible with LSX; tracking interchangeability with MICRO SWITCH HDLS; variety of heads and non-sparking actuators; 10 A thermal electrical rating; silver or gold contacts; ATEX-required external ground screw; global agency approvals |



BX2

GSX

CLSX

BX2 (1/2 NPT, 3/4 NPT, 20 mm): UL, cUL, ATEX, IEC Ex, NEPSI (China), EAC (Russia), IN METRO (Brasil)

cULus, ATEX, IEC Ex, IN METRO (Brasil)

UL, CSA

NEMA 7, Div. 1 & 2, Class I, Groups B, C, & D
NEMA 9, Div. 1 & 2, Class II, Groups E, F, & G
II 2 G Ex d IIC T6 Gb
II 2 D Ex tb IIIC T85°C Db

NEMA 7, Div. 1 & 2, Class I, Groups B, C, & D
NEMA 9, Div. 1 & 2, Class II, Groups E, F, & G
II 2 G; Ex d IIC T6
II 2 D; Ex d tD A21 T85°C

NEMA 7, Div. 1 & 2, Class I, Groups B, C, & D
NEMA 9, Div. 1 & 2, Class II, Groups E, F, & G

IP67; NEMA 1, 3, 4, 6, 13

IP67; NEMA 1, 4, 12, 13

NEMA 1, 3, 4, 13

stainless steel

aluminum, epoxy coated

aluminum, epoxy coated

side rotary, side rotary (maintained), side pin plunger, side roller plunger, top pin plunger, top roller plunger

side rotary, top pin plunger, top roller plunger, top roller lever

cable/rope pull, maintained

conduit: 0.5 in - 14NPT, 0.75 in - 14NPT, 20 mm

conduit: 0.5 in - 14NPT, 20 mm, PG13,5

conduit: 0.5 in - 14NPT, 0.75 in - 14NPT

- 1NC 1NO SPDT snap action
- 2NC 2NO DPDT snap action
- 2NC 2NO DPDT snap action, center neutral
- 2NC 2NO DPDT snap action, sequential

- 1NC 1NO snap action
- 2NC 2NO snap action
- 2NC slow action
- 2NO slow action
- 1NC 1NO BBM slow action
- 1NC 1NO MBB slow action
- 2NC 1NO BBM slow action
- 2NC 2NO BBM slow action
- 3NC 1NO BBM slow action
- 4NC slow action

- 1NC
- 1NC 1NO
- 2NC

-40 °C to 70 °C
[-40 °F to 158 °F]

-40 °C to 70 °C
[-40 °F to 158 °F]

-1 °C to 70 °C
[-30 °F to 158 °F]

10 A (thermal)
AC15, A600; DC13, R300

10 A (thermal)
AC15, A300/A600; DC13, Q300

10 A (thermal)
AC15, A300/A600; DC13, Q300

146,1 mm x 76,2 mm x 72,9 mm
[5.75 in x 3.00 in x 2.87 in]

154,2 mm x 76,2 mm x 72 mm
[6.07 in x 3.00 in x 2.84 in]

158,24 mm x 76,2 mm x 73,2 mm
[6.23 in x 3.00 in x 2.88 in]

corrosion-resistant stainless steel housing; diverse conduit selection; tracking interchangeability with MICRO SWITCH LSX and BX series products; variety of heads and non-sparking actuators; 10 A thermal electrical rating; silver or gold contacts; ATEX-required external ground screw; global agency approvals

snap-action or slow-action contacts with positive break of NC contacts; simple installation; positive action push plunger; global agency approvals; silver or gold contacts



positive-opening operating of NC contacts; cable length may be 200 ft in straight line; internal grounding screw



Limitless™ Solutions | Wireless Limit Switches

New alternative enables designers to work without limitations of traditional tethered devices. Enables presence, absence, or position in applications where wired products are not feasible due to functionality and/or cost. Applications include door position, construction/ag machines, conveyors, cranes, grain diverters, lifts, material handling, presses, and valves.



| Series | WGLA | WLS |
|--|--|---|
| Housing type | EN 50041 | EN 50041 and back-mounting |
| Housing material | powder-coated, zinc die-cast | powder-coated phosphate epoxy finish, zinc die-cast |
| Radio | WPAN 802.15.4; 2.4 GHz | WPAN 802.15.4; 2.4 GHz |
| Signal range | 1000 ft [305 m] in US/Canada | 1000 ft [305 m] in US/Canada |
| Sealing | IP67; NEMA 1, 4, 12, 13 | IP67/IP68; NEMA 1, 3, 4, 6, 6P, 12, 13 |
| Actuators/ operating heads | side rotary, top pin plunger, top roller plunger, top roller lever | over 15 side rotary actuators; pin/roller plunger, side/top rotary (with more than 15 levers), cat whisker, wobble stick, side shaft eyelet pull, maintained/momentary side plunger, and cable pull operating heads |
| Antenna types | direct or remote mounts, omni-directional | direct or remote mounts, omni-directional |
| Sensing target | - | - |
| Electrical connection | - | - |
| Electromechanical switch | - | - |
| Operating characteristics | - | - |
| Measurements (H x W x D) (without antenna) | 102,85 mm x 42 mm x 42 mm [4.05 in x 1.65 in x 1.65 in] | 106,68 mm x 41,15 mm x 44,45 mm [4.20 in x 1.62 in x 1.75 in] |
| Features | reliable, flexible, and secure wireless transmission; EN 50041 die-cast metal enclosure; FCC 15, IC, ACMA, & ETSI; EMI immunity; full complement of operating heads and levers; direct or remote mount antenna options | operating head rotary tested in excess of 50 million cycles; diaphragm seal between head and body cavity; twin shaft seals protect head and internal components from corrosion and debris; reliable, flexible, and secure wireless transmission; FCC 15, IC, ACMA, & ETSI |





| WBX Hazardous Location Switch | WLS Non-Contact Switch | WLS Single-Switch Adapter | WOI |
|--|--|--|--|
| II 1 GD, Ex ia IIC T4 Ga, Ex ia IIIC T135°C Da | EN 50041 and back-mounting | EN 50041 mounting comp. & back-mtg | screw mount |
| powder-coated phosphate epoxy finish, zinc die-cast | zinc head and body are phosphate treated and epoxy finished; 30% glass-filled PBT plastic head | zinc body is phosphate treated and epoxy filled; 30 % glass-filled PBT plastic head | powder-coated aluminum |
| WPAN 802.15.4; 2.4 GHz | WPAN 802.15.4; 2.4 GHz | WPAN 802.15.4; 2.4 GHz | WPAN 802.15.4; 2.4 GHz |
| 1000 ft [305 m] in US/Canada | 1000 ft [305 m] in US/Canada | 1000 ft [305 m] in US/Canada | 1000 ft [305 m] in US/Canada |
| NEMA 1, 3, 4, 13; IP67 (self-certified) | IP67; NEMA 1, 4, 12, 13 | IP67; NEMA 1, 4, 12, 13 | IP65 |
| side rotary, top plunger, wobble stick; many side rotary lever options | - | - | pushbutton operators: 22 mm round flush momentary, 29 mm mushroom head momentary, 40 mm mushroom head maintained (push-pull); no operator option available for use with user supplied 22 mm operator and contact blocks |
| direct or remote mounts, omni-directional | direct or remote mounts, omni-directional | direct or remote mounts, omni-directional | direct or remote mounts, omni-directional |
| - | top and side of head | - | - |
| - | - | 4-pin M12 micro-connector with three-pole, single keyway female receptacle cable grip with internal screw connector (maximum cable length 3 m [9.84 ft]) | - |
| - | - | SPDT (Form C) switch with low-energy contacts (i.e., gold) capable of reliably controlling a 3.6 Vdc @ 30 mA electrical load to ensure proper operation | - |
| - | operating point: 3,81 mm [0.15 in] min.; release point: 15,24 mm [0.60 in] max. with use of WMG1 magnet | - | - |
| 267,45 mm x 52,1 mm x 73,18 mm [10.54 in x 2.05 in x 2.88 in] | 122,43 mm x 41,15 mm x 44,45 mm [4.82 in x 1.62 in x 1.75 in] | 137,16 mm x 41,15 mm x 44,45 mm [5.40 in x 1.62 in x 1.75 in] | 130 mm x 85 mm x 66 mm [5.1 in x 3.4 in x 2.6 in] |
| Provides an independent layer of protection for equipment, by giving an immediate indication that a remote mechanical device is not positioned or moving correctly | non-contact presence/absence detection of a variety of different magnet styles and magnetic actuators; reliable, flexible, and secure wireless transmission; EN 50041 die-cast metal enclosure; FCC 15, IC, ACMA, & ETSI; EMI immunity | converts almost any electromechanical switch with low-energy contacts (i.e., gold) into a wireless switch; reliable, flexible, and secure wireless transmission; EN 50041 die-cast metal enclosure; FCC 15, IC, ACMA, & ETSI; EMI immunity | enables operator indication (i.e. push button) from remote locations where wiring is too costly or not possible; flexibility for users to choose and install their desired operator type; i.e. 22 mm rotary switch, 22 mm key switch, etc.; ability to reconfigure and network multiple WOI inputs |

Limitless™ Solutions | Wireless Monitors and Receivers

Provide a visual, audio, and output based on a signal received from a Limitless™ input. Wireless technology eliminates the need for communications cabling or power line installation, saving both time and money.

Applications include positioners, manual process valves, eye bath stations, emergency showers, tank level, steam traps, louvers, mining conveyor, and grain diverters.



| Series | WPMM | WDRR | WMPR |
|---|--|--|---|
| Housing type | snap-in panel or screw mount design | din-rail or screw mount design | 35 mm din-rail bracket or through-hole mounting plate design, 3,5 mm [#8] machine screws |
| Housing material | LCP, VECTRA E130i | flame retardant ABS (acrylonitrile butadiene styrene) | flame retardant ABS (acrylonitrile butadiene styrene) |
| Radio | - | WPAN 802.15.4; 2.4 GHz | WPAN 802.15.4, 2.4 GHz |
| Signal range | 1000 ft [305 m] in US/Canada | 1000 ft [305 m] in US/Canada | 1000 ft [305 m] in US/Canada |
| Sealing | IP67 | IP20 | IP20 |
| Outputs | NPN normally open current sinking; PNP normally open current sourcing; solid state relay | Selectable: NPN-type current sinking open collector or NPN-type "totem pole"; PNP-type current sourcing open collector or PNP-type "totem pole" | EtherNet/IP™ (ODVA - EtherNet/IP Conformance Tested™) |
| Antenna types | direct or remote mounts, omnidirectional | direct or remote mounts, omnidirectional | direct or remote mounts, omnidirectional |
| Supply voltage | 10 Vdc to 30 Vdc with reverse polarity protection | 10 Vdc to 28 Vdc with reverse polarity protection | 10 Vdc to 30 Vdc |
| Supply current | 750 mA | 500 mA max. | 500 mA max. |
| Measurements (H x W x D) (without antenna) | 31,75 mm x 53,84 mm x 74,30 mm [1.250 in x 2.120 in x 2.925 in] | 88,9 mm x 152,4 mm x 45,8 mm [3.5 in x 6 in x 1.8 in] | 81,3 mm H x 160 mm W x 43,2 mm D [3.2 in H x 6.3 in W x 1.7 in D] |
| Temperature range | -40 °C to 85 °C [-40 °F to 185 °F] | -20 °C to 70 °C [-4 °F to 158 °F] | -20 °C to 70 °C [-4 °F to 158 °F] |
| Features | reliable, flexible, and secure wireless transmission; can potentially monitor up to 16 Limitless™ switches; field pairing function allows for rapid configuration (adding or subtracting switches); WPAN 802.15.4 2.4 GHz point-to-point; FCC 15, IC, ACMA, & ETSI; EMI immunity; direct or remote mount antenna options | selectable npn or pnp output; configurable normally open or normally closed output for up to 14 Limitless™ inputs; WPAN 802.15.4 2.4 GHz point-to-point; FCC 15, IC, ACMA, & ETSI; EMI immunity; LEDs indicate change of status, low battery, RF signal loss, pairing function, and diagnostic functions; eliminates issues with wire connection integrity on moving equipment | LCD's function buttons on the front panel allow the user to easily navigate through the menu to obtain status of the switch actuation state, sensor value, battery condition, RF signal loss, node pairing, node update rate, fault indications, etc.; Output is ODVA certified – EtherNet/IP Conformance Tested™; Indication for up to 14 Limitless™ digital or analog nodes |

Specialty Limit Switches | Relialign™ Door Interlock Switches

Designed specifically for residential and commercial swing-door applications, including swing-door elevators, platform lifts, dumbwaiters, and lifts for the mobility impaired. Holds the door in place and prevents it from being opened when not desired. Design contributes to increase safety, reduce nuisance stoppages and call-backs, and simplified wiring and installation.





| Door Interlock | Relialign™ RDI Series | Relialign™ CDI Series |
|---------------------------------|--|--|
| Description | door interlock for residential swing-style doors, elevators, and vertical lifts. available with metal housing | door interlock for commercial swing-style doors, elevators, and vertical lifts. available with metal housing |
| Use | In the USA: residential swing door applications, specifically dumbwaiters, lifts for the mobility impaired, and swing-door elevators In Canada: residential swing door applications, specifically elevators and dumbwaiters | In the USA: swing door applications, specifically dumbwaiters, material lifts, lifts for the mobility impaired and private residence swing-door elevators In Canada: swing door applications, specifically dumbwaiters, material lifts, and residential elevators |
| Housing | metal (white and architectural bronze) | metal (white) |
| Approvals | compliant to ASME A17.1 and UL 104 | compliant to ASME A17.1, ASME A18.1, cULus, and CAN/CSA B44 |
| Voltage | 24 Vdc; 24 Vac | 24 Vac/Vdc, ±5 % |
| Connection | terminal strip or cat 5 available | terminal strip or cat 5 available |
| Measurements (H x W x D) | 247,65 mm x 51,44 mm x 49,23 mm [9.75 in x 2.025 in x 1.938 in] | 247,65 mm x 51,44 mm x 49,23 mm [9.75 in x 2.025 in x 1.938 in] |
| Features | two separate mechanisms to indicate door closure; metal key; internal solenoid control; no open or exposed contacts; configurable product platform | long life of 1 million operations minimum; exceeds commercial pull force standard of 675 pound pull force by 2X |

Machine Safety | MICRO SWITCH Safety Switches




From factory floor to assembly line, from packaging machinery to robot cells, Honeywell delivers reliability and safety in compact, cost-effective safety switches. Enhanced performance, extended productivity, and full-line flexibility. Most models are SIL 3 capable.



| Series | CPS/2CPS | 24CE/924CE |
|---|---|--|
| Attributes | single/dual head cable pull designed to provide emergency stop protection; often used for exposed conveyor and assembly lines | miniature, compact die-cast zinc housing construction with a wide variety of actuators, IEC945-5-1, EN60947-5-1 |
| Potential applications | conveyor applications, perimeter guard | small doors and apertures |
| Housing | zinc, epoxy coated | zinc, epoxy coated |
| Approvals | UL, CSA, CE, SIL 3 capable | 24CE: CE; 924CE: UL, CE, SIL 3 capable |
| Sealing | IP67; NEMA 1, 4, 12, 13 | IP66 |
| Contacts | silver, gold | silver |
| Circuitry (double break contacts, except FF and FFS) | <ul style="list-style-type: none"> • 1NC 1NO • 2NC 2NO • 3NC 1NO • 4NC | <ul style="list-style-type: none"> • 1NC slow action, • 1NC 1NO slow action BBM • 1NC 1NO slow action MBB |
| Differentiator | rugged, sealed, large wiring cavity; indicators; wide temperature tolerance; longest span available (up to 500 feet/152 m on dual head 2CPS) | smallest safety switch offering from Honeywell; tough and rugged switch, designed to operate in harsh operating environments |
| Measurements (less levers) H x W x D | 1CPS: 178,2 mm x 99,1 mm x 65,3 mm [6.8 in x 3.9 in x 2.57 in] 2CPS: 152,4 mm x 165,1 mm x 84,1 mm [6.0 in x 6.5 in x 3.31 in] | 49,0 mm x 40,0 mm x 16,0 mm [1.93 in x 1.57 in x 0.63 in] |
| Temperature | -40 °C to 85 °C [-40 °F to 185 °F] | 0 °C to 70 °C [32 °F to 158 °F] -40 °C to 70 °C [-40 °F to 158 °F] (optional) |
| Electrical rating | 10 A (thermal); AC15, A300; DC13, Q300 | AC15, B300; DC13, R300 |
| Features | optional hardware packs; heavy-duty terminals; gold contacts; positive opening of NC contacts (up to 4 contacts); LED status lights; positive opening NC contacts  | simple two screw mounting; available pre-wired with choice of cable lengths or connector fitted; side and bottom cable entry; positive opening NC contacts  |







| GSS | GSS Hinge | GSX | FF and FFS |
|--|---|---|---|
| EN50047 (metal or plastic), EN50041 (metal), designed to global standards | EN50047 mounting compatible, metal or plastic housing for access door safety hinge applications | switch characteristics to EN50041, heavy-duty metal body, explosion-proof safety switch designed for hazardous area applications | non-contact safety switches either magnetically operated or by electronically coded magnets providing high degree of tamper-resistant, reliable operation |
| medium/large doors and apertures | medium/large doors | gates, doors, access panels, cages | small doors and apertures |
| glass-filled polyester, zinc epoxy coated | glass-filled polyester, zinc epoxy coated | aluminum, epoxy coated | ABS resin-filled, stainless steel |
| UL, CSA, CE, SIL 3 capable | UL, CSA, CE, SIL 3 capable | cULus, ATEX, IEC Ex, IN METRO (Brasil) SIL 3 capable | UL, CE |
| metal: IP66; NEMA 1, 4, 12, 13 plastic: IP66/IP67; NEMA 1, 4 (indoor), 12, 13 | metal: IP66; NEMA 1, 4, 12, 13 plastic: IP66; NEMA 1, 4 (indoor), 12, 13 | IP67; NEMA 1, 4, 6, 12, 13 | IP67, NEMA 4 |
| silver, gold | silver, gold | silver, gold | - |
| EN50041 <ul style="list-style-type: none"> • 1NC 1NO snap action • 1NC 1NO slow action BBM • 1NC 1NO slow action MBB • 2NC slow action • 2NC 2NO snap action • 4NC slow action • 2NC 1NO slow action BBM • 2NC 2NO slow action BBM • 3NC 1NO slow action BBM EN50047 <ul style="list-style-type: none"> • 1NC 1NO snap action • 1NC 1NO slow action BBM • 1NC 1NO slow action MBB • 2NC slow action | <ul style="list-style-type: none"> • 1NC 1NO snap action • 2NC slow action • 4 NC slow action • 2NC 2 NO slow action BBM • 3NC 1NO slow action BBM | <ul style="list-style-type: none"> • 1NC 1NO snap action • 1NC 1NO slow action BBM • 1NC 1NO slow action MBB • 2NC slow action • 2NC 2NO snap action • 4NC slow action • 2NC 1NO slow action BBM • 2NC 2NO slow action BBM • 3NC 1NO slow action BBM | 1 or 2 safety contacts. Select catalog listings offer an auxiliary contact |
| highly visible red housing; snap action and slow action basic switches | highly visible red housing; actuator head may be rotated in 90° increments | hazardous location and positive-break safety switch with cULus, ATEX, IEC Ex, IN METRO approvals | large actuation window from almost any angle (ranges ~6 mm to 20 mm); sealed, compact and rugged design |
| 83,0 mm x 30,5 mm x 30,0 mm [3.27 in x 1.20 in x 1.18 in] | 83,0 mm x 30,5 mm x 30,0 mm [3.27 in x 1.20 in x 1.18 in] | 154,2 mm x 76,2 mm x 72 mm [6.07 in x 3.00 in x 2.84 in] | 87 mm x 24 mm x 19 mm [3.43 in x 0.95 in x 0.75 in] |
| -25 °C to 85 °C [-13 °F to 185 °F] -40 °C to 85 °C [-40 °F to 185 °F] (side rotary operating heads) | -25 °C to 85 °C [-13 °F to 185 °F] | -40 °C to 70 °C [-40 °F to 158 °F] | -10 °C to 55 °C [14 °F to 131 °F] |
| multiple contact options (up to 4 NC); full range of actuator heads and levers; reliable low energy switching; tested to 15 million operations; positive opening NC contacts  | low profile design; available with 3 actuator styles (left, center, right); multiple contact options; reliable low energy switching; positive opening NC contacts  | extensive switching and actuating options; designed so even welded contacts will open and machine will stop in emergency with positive opening NC contacts (direct mechanical linkage)  | guard status indication; small, easy to mount; either pre-wired or connector fitted; allows for door misalignment with door closed sensing |

Machine Safety | MICRO SWITCH Safety Switches

Designed to help pass any test with the most impressive safety switch portfolio and solutions for application-specific needs. Widest range of sizing, sealing alternatives, enclosure materials, actuator styles, and contact options available.



| Series | GKR/L | GKM |
|---|---|---|
| Attributes | heavy-duty metal body solenoid trapped key interlock switch designed not to release until hazard has been removed; for large doors/cages | most compact key-operated safety product available; fully sealed construction |
| Potential applications | large, heavy door, cage and gate machine apps | small doors and apertures |
| Housing | zinc, epoxy coated | glass-filled polyester |
| Approvals | UL, CSA, CE, SIL 3 capable | UL, CSA, CE, SIL 3 capable |
| Sealing | IP68; NEMA 1, 4, 6P, 12, 13 | IP67; NEMA 1, 12, 13 |
| Contacts | silver, gold | silver, gold |
| Circuitry (double break contacts) | <ul style="list-style-type: none"> • 1NC 1NO slow action BBM • 2NC 1NO slow action BBM • 2NC 2NO slow action BBM • 3NC 1NO slow action BBM • 2NC slow action • 4NC slow action • 2NC 2NO snap action | <ul style="list-style-type: none"> • 1NC 1NO BBM • 2NC |
| Differentiator | rugged design withstands vibration, harsh environments; provides long-term durability | can be used for doors as small as 160 mm [6.3 in] with small closed radius; available cabled or with integrated M12 connectors for plug-and-play install |
| Measurements (less levers) H x W x D | 160,0 mm x 110,0 mm x 48,8 mm [6.3 in x 4.33 in x 1.92 in] | 69,4 mm x 34,0 mm x 16,0 mm [2.73 in x 1.34 in x 0.63 in] |
| Temperature | -25 °C to 40 °C [-13 °F to 104 °F] | -25 °C to 85 °C [-13 °F to 185 °F] |
| Electrical rating | AC15, A300; DC13, Q300 | AC15, A300; DC13, Q300 |
| Features | solenoid power-to-lock or power-to-unlock; key retain force 1000 N max; multiple key and lockout devices; dual LED indicator; available with key entry (4 face orientations); up to 4 contacts; manual override; positive opening NC contacts  | double insulated, no ground wiring required; wiring entrance options from bottom, side, or both (dual entry GKME for daisy chain capability); variety of keys available for top or front entry options; positive opening NC contact  |





GKE

GKN

GK

compact housing size, standard IEC 20 mm mounting

common footprint safety switch for multiple applicability; multiple contacts, multiple key and wiring entry points

heavy duty metal body keyed interlock switch designed for large doors and cages

small doors and apertures

small/medium doors and apertures

large, heavy door cage and gate applications

glass-filled polyester

glass-filled polyester

zinc, epoxy coated

cULus, CE, S-mark, SIL 3 capable

cULus, CE, CCC, S-mark, SIL 3 capable

UL, CSA, CE, SIL 3 capable

IP66/IP67; NEMA 1, 4X (indoor), 12, 13

IP67; NEMA 1, 4X (indoor use only), 12, 13

IP67; NEMA 1, 4, 12, 13

silver

silver

silver, gold

- 1NC 1NO snap action
- 1NC 1NO slow action BBM
- 2NC slow action

- 2NC 1NO slow action BBM
- 3NC slow action

- 1NC 1NO snap action
- 2NC 2NO snap action
- 1NC 1NO slow action BBM
- 1NC 1NO slow action MBB
- 2NC 1NO slow action BBM
- 2NC 2NO slow action BBM
- 3NC 1NO slow action BBM
- 2NC slow action
- 4NC slow action

small MIN-DIN footprint; simple wiring and mounting; double insulated

one switch stocking for multiple contact, key entry, and wiring application combinations; large wiring cavity

unique friction feature for key retention; rugged design withstands vibration, harsh environments, and provides long-term durability (tested 15 million cycles)

95,7 mm x 30,5 mm x 32,9 mm
[3.77 in x 1.20 in x 1.30 in]

90,0 mm x 64,0 mm x 30,0 mm
[3.55 in x 2.52 in x 1.18 in]

121,6 mm x 42 mm x 42,6 mm
[1.79 in x 1.652 in x 1.68 in]

-25 °C to 85 °C [-13 °F to 185 °F]

-25 °C to 70 °C [-13 °F to 158 °F]

-25 °C to 85 °C [-13 °F to 185 °F]

AC15, A300/A600; DC13, Q300

AC15, A600; DC13, Q300

AC15, A300/A600; DC13, Q300

medium duty switch covers most common 1NC/1NO and 2NC applications key entry from top and front

multi-use, multi-option; up to 3 contacts for additional monitoring; 4 key head entries; knock-out points for wiring entry; double insulated body; rigid and flexible key options available

top or side entry lockout device options available; LED indicator; up to four contacts; positive opening NC contacts





As one of the world's leading providers of sensors and switches, Honeywell understands and meets the requirements of a wide variety of industries.

Honeywell is a global leader in providing reliable, cost-effective sensing and switching solutions for our customers' applications. We serve thousands of customers in four core industry segments: industrial, medical equipment, transportation, and aerospace/military products.

Aerospace and Defense

Aerospace applications are among the most demanding for any type of product. Rigorous FAA requirements, extreme environments (temperature, shock, vibration, the need for hermetic sealing), and the ability to customize devices are just a few of the parameters often required of sensors and switches in these applications. Aerospace customers typically value speed in prototyping and development, and Honeywell's vertically integrated, AS9100-approved manufacturing locations enhance our ability to produce devices in a wide variety of packages. The precision output of our products helps reduce risk and cost in key applications while also minimizing the need for unscheduled maintenance.

Honeywell's in-depth aerospace engineering experience allows us to work with customers in the design and development of products that best meet the specified requirements of their individual applications. Making products simple to install makes the job easier every step of the way. And, the odds are that Honeywell is already on the list of trusted suppliers for many

aerospace companies, underscoring the decades of experience we bring to this field.

Honeywell products for this industry (many of them PMA-certified) include force sensors, load cells, potentiometers, pilot controls, pressure sensors, pressure switches, resolvers, sensor/actuator assemblies for systems ranging from aerostructures to fuel control to flight surfaces, speed sensors, temperature probes, thermostats, torque sensors, y-guides for cargo systems, MICRO SWITCH sealed and high-accuracy switches, MICRO SWITCH pushbutton switches, and MICRO SWITCH rocker and toggle switches.

Medical

Medical applications typically require sensors and switches that are highly stable and extremely reliable to enhance patient safety and comfort. Stability is often essential to minimize long term drift, reduce the need for recalibration, and improve ease of use for medical equipment operators. Reliability enhances patient safety in life-critical applications, reduces downtime, and improves test throughput in applications such as clinical diagnostics. The product needs to be



easy to use and easy to design into a system, so Honeywell's extensive customization and built-in calibration/amplification capabilities are strong benefits. Confidence in Honeywell's product performance, reliability, and availability provide peace of mind for medical equipment manufacturers who choose Honeywell.

Honeywell offerings for this industry include airflow sensors, board mount pressure sensors and heavy duty pressure transducers, Hall-effect magnetic position sensors, humidity sensors, flexible heaters, force sensors, thermostats, infrared sensors, pressure and vacuum switches, potentiometers and encoders, MICRO SWITCH pushbutton, rocker, and toggle switches, and hour meters.

Industrial

The industrial arena can be a rough one. From high-speed food processing to high-force stamping applications, reliable and cost-effective sensors and switches often help minimize repair costs, maximize system life, and reduce overall system expense. Durability can mean the difference between smooth-running processes and expensive downtime. Accurate, repeatable sensor or switch output can reduce the need for calibration once the device is applied. Because of the wide variety of potential applications, Honeywell's ability to deliver a customized product that can meet virtually any size, weight, and power requirement – as well as any packaging stipulations for tough, harsh environments – often makes it easy to incorporate and use our devices. Safety is another important consideration for industrial users, and our products meet a wide variety of regulatory safety requirements.

Honeywell's industrial product line includes airflow sensors, current sensors, humidity sensors, fiber-optic and liquid-level sensors, linear position sensors, oxygen



sensors, potentiometers and encoders, speed sensors, temperature probes, ultrasonic sensors, thermostats, flexible heaters, SMART position sensors, board mount pressure sensors and heavy duty pressure transducers, force sensors, push-pull switches, and MICRO SWITCH basic switches, hazardous area switches, key and rotary switches, limit switches, sealed and high-accuracy switches, pushbutton, rocker, toggle switches, and relays.




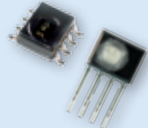




Transportation

Getting from Point A to Point B is often challenging for end-customers of transportation providers – Honeywell aims to make the trip easier with highly reliable, cost-effective switches and sensors. Our products are designed to support rigorous engine requirements, and their efficiency can also help optimize engine performance. Customization is often required to allow a switch or sensor to be mounted in tight or challenging environments including vibration, temperature extremes, and road contamination. The durability of Honeywell products enhances system reliability, which is also boosted by the stable, accurate output of our devices. All of these capabilities allow demanding customers to rely on Honeywell's many years of experience in the transportation industry.







Honeywell products for transportation applications include Hall-effect rotary position sensors, inertial measurement units, infrared sensors, keyless entry sensors, magnetic position sensors, pressure sensors, speed and direction sensors, ultrasonic sensors, thermostats, temperature probes, SMART position sensors, and MICRO SWITCH pushbutton, rocker, and toggle switches.




SENSORS

| | | | |
|---|---|---|---|
|  | <p>Thermostats: Commercial and precision snap-action. Automatic or manual reset options, phenolic or ceramic housings. May be used in: Telecommunications • Battery Heater Controls • Computers • Copy Machines • Fax Machines • Food Service • Food Carts • Small and Major Appliances • Heat and Smoke Detectors • HVAC Equipment</p> |  | <p>Pressure transducers – heavy duty: Provide a complete amplified and compensated pressure measurement solution. Choice of ports, connectors, outputs and pressure ranges, engineered to be resistant to a wide variety of media for use in most harsh environments. May be used in: Industrial HVAC/R and Air Compressors • General System and Factory Automation Pump, Valve and Fluid Pressure • Transportation (Heavy Equipment and Alternative Fuel Vehicles) System • Pneumatics • Hydraulics</p> |
|  | <p>Magnetic sensors: Digital and analog Hall-effect position ICs, magnetoresistive position ICs, Hall-effect vane and magnetic sensors. May be used in: Speed and RPM Sensing • Motor/Fan Control • Magnetic Encoding • Disc Speed • Tape • Flow-Rate Sensing • Conveyors • Ignitions • Motion Control/Detection • Power/Position • Magnetic Code Reading • bration • Weight Sensing</p> |  | <p>Humidity sensors: Digital, analog, and combined humidity/temperature sensing versions. Provide on-chip signal conditioning with accuracy capability to $\pm 1.7\%$ RH. Stable, reliable, low-drift performance. Standardized, platform-based sensors. May be used in: Medical • HVAC/R • Weather Stations • Air Compressors • Telecommunications • Grain Storage • Incubators</p> |
|  | <p>Current sensors: Accurate and fast response. Almost no thermal drift or offset with temperature. Adjustable linear, null balance, digital and linear. May be used in: Variable Speed Drives • Overcurrent Protection • Power Supplies • Ground Fault Detectors • Robotics • Industrial Process Control • Wattmeters</p> |  | <p>Flexible heaters: Flat or custom geometry configurations with single, multiple and variable watt densities. Stable, uniform heating. Can be bonded parts or combined in value-added assemblies. May be used in: Medical • HVAC/R • LCD Displays • Power Generation • Telecommunication</p> |
|  | <p>Pressure sensors – board mount: Full line of industrial-grade sensors: media-isolating design, multiple ports and outlets, and electrical configurations. May be used in: Pneumatic Controls • Air Compressors • Process Monitoring • Hydraulic Controls • VAV Controls • Clogged Filter Detection • Presence/Absence of Flow • Transmissions</p> |  | <p>Temperature sensors: Customized probes, thermistors and RTD sensors. Plastic/ceramic, miniaturized, surface-mount housings and printed circuit board terminations. May be used in: Semi-Conductor Protection • Vending Machines • Power Generation • Hydraulic Systems • Medical • Thermal Management • Temperature Compensation</p> |

ELECTROMECHANICAL SWITCHES

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|  | <p>MICRO SWITCH basic switches: Snap-action precision switches. Compact. Lightweight. Designed for repeatability and enhanced life. Basic switches: large, standard, miniature, subminiature, hermetically sealed, water-tight and high-temperature versions. May be used in: Vending Machines • Communication Equipment • HVAC • Appliances • Automotive • Electronic Gaming Machinery • Valve Controls • Irrigation Systems • Foot Switches • Pressure • Temperature Controls</p> |  | <p>MICRO SWITCH sealed and high accuracy switches: Precision "snap action" mechanisms. Wide variety of actuators, terminations, circuitry configurations, electrical ratings, contact materials and operating characteristics. May be used in: Landing Gear • Flap/Stabilizer Controls • Thrust Reversers • Space Vehicles • Armored Personnel Carriers • De-Icer Controls • Wingfold Actuators • Industrial Environments • Valves • Underwater</p> |
|  | <p>MICRO SWITCH hazardous area switches: Flame path designed to contain and cool escaping hot gases that could cause an explosion. MICRO SWITCH EX, BX, CX and LSX Series. May be used in: Grain Elevators and Conveyors • Off-Shore Drilling • Petrochemical • Waste-Treatment Plants • Control Valves • Paint Booths • Hazardous Waste Handling Facilities</p> |  | <p>Key and rotary switches: Environmentally sealed, 2-3-4 position switches. O-rings help keep dirt and moisture out and prolong life. May be used in: All-Terrain Vehicles • Golf Carts • Snowmobiles • Scissor Lifts • Telehandlers • Construction and Marine Equipment • Skid Loaders • Agricultural Equipment • Material Handlers</p> |
|  | <p>Pressure and vacuum switches: Feature setpoints from 3 psi to 4500 psi. Rugged components have enhanced repeatability, flexibility and wide media capability. Uses diaphragm or quad seal/piston. May be used in: Transmissions • Hydraulics • Brakes • Steering • Generators/Compressors • Dental Air • Embalming Equipment • Oxygen Concentrators • Air Cleaners • Fuel Filters • Pool Water Pressure</p> |  | <p>MICRO SWITCH toggle switches: Hermetic and environmentally sealed options. Enhanced reliability. Center pin for ultimate stabilization. Available in many shapes, sizes and configurations. May be used in: Aerial Lifts • Construction Equipment • Agriculture and Material-Handling Equipment • Factory-Floor Controls • Process Control • Medical Instrumentation • Test Instruments • Military/Commercial Aviation</p> |

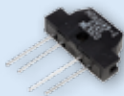
LIMITLESS™ WIRELESS SOLUTIONS

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|  | <p>Limitless™ switches and receivers: Combines the best of MICRO SWITCH limit switches with commercial wireless technology. Beneficial for remote monitoring where wiring/maintenance is not physically possible or economically feasible. Used for position sensing and presence/absence detection. Limitless™ Operator Interface: Adds a human interface device to the product-driven interfaces of Limitless™ switches and receivers. Choose and install a desired operator or utilize one of Honeywell's pushbuttons. May be used in: Valve Position • Crane Boom/Jib/Skew Position • Lifts • Material Handling • Presses • Construction/Ag Machines • Conveyors • Industrial Environments • Remote/Temporary Equipment • Grain Diverters or Flaps • Door Position</p> |
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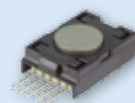
With more than 50,000 sensing, switching and control products ranging from snap-action, limit, toggle and pressure switches to position, speed, pressure and airflow sensors, Honeywell has one of the broadest sensing and switching portfolios available.



Position sensors: The **SMART position sensor** measures linear, angular or rotary position of a magnet attached to a moving object so that the object's position can be determined or controlled. Its simple, non-contact design eliminates mechanical failure mechanisms, reduces wear and tear, and improves reliability and durability.
May be used in: Valve Position • Material Handling • Plastic Molding • Passenger Bus Level Position • Truck-Mounted Crane Outrigger Position • Aerial Work Lift Platform • Front Loader and Digger/Excavation Boom Position
Potentiometer sensors: Measure linear, rotary position or displacement. Honeywell's proprietary conductive plastic delivers extensive temperature range and infinite resolution, and provides precision position measurement.
May be used in: Robotic Motion Control • Marine Steering • In-Tank Level Sensing
Ultrasonic sensors: Measure time delays between emitted and echo pulses, often accurately determining the sensor-to-target distance.
May be used in: Level Measurement • Height and Thickness Sensing • Diameter Control



Infrared sensors: IREDS, sensors and assemblies for object presence, limit and motion sensing, position encoding and movement encoding. Variety of package styles, materials and terminations.
May be used in: Printers/Copiers • Motion Control Systems • Metering • Data Storage Systems • Scanning • Automated Transaction • Drop Sensors • Non-Invasive Medical Equipment



Force sensors: Variety of package styles and various electrical interconnects including pre-wired connectors, printed circuit board mounting and surface mounting for flexibility.
May be used in: Infusion and Syringe Pumps • Blood Pressure Equipment • Pump Pressure • Drug Delivery Systems • Occlusion Detection • Kidney Dialysis Machines



Proximity sensors: Designed to meet demanding temperature, vibration, shock and EMI/EMP interference requirements. Number of housing materials and termination styles.
May be used in: Aircraft Landing Gear • Gun Turret Position Control • Door/Hatch Monitoring



Speed sensors: Measure speed, position and presence detection utilizing magneto-resistive, variable reluctance, and Hall-effect technologies.
May be used in: Cam and Crankshafts • Transmissions • Fans • Pumps • Mixers • Rollers • Motors



Airflow sensors: Advanced microstructure technology. Sensitive and fast response to flow, amount/direction of air or other gas. Analog or digital output. Thin-film, thermally isolated bridge structure consists of a heater and temperature sensing elements.
May be used in: HVAC • Respirators • Process Control • Oxygen Concentrators • Gas Metering • Chromatography • Leak Detection Equipment • Medical/Analytical Instrumentation • Ventilation Equipment



Rotary position sensors: Digital and analog Hall-effect, magneto-resistive and potentiometric devices and resolvers for sensing presence of a magnetic field or rotary position. Directly compatible with electronic circuits for application flexibility.
May be used in: Audio and Lighting • Frequency • Temperature • Position • Medical/Instrumentation • Computer Peripherals • Manual Controls • Joysticks • Telecom • Welding • Heating • Aerospace



MICRO SWITCH aerospace-grade pressure switches: Lightweight, compact pressure switches. Meets military and DO-160 standards. Lower operating force provides application versatility with enhanced precision. Design modularity allows for configuration of the switch, facilitating rapid customization.
May be used in: Aerospace Systems • Engines, Fuel Pressure and Hydraulic Systems • Military Ground Vehicles • Ordnance and Munitions Release Systems • Military Maritime Systems



MICRO SWITCH limit switches: Broadest and deepest limit switch portfolio. Rugged, dependable position detection solutions. MICRO SWITCH heavy-duty limit switches (HDLS), medium-duty and global limit switches. Hermetically and environmentally sealed switches.
May be used in: Machine Tools • Woodworking • Textile • Printing Machinery • Metal Fabrication • Balers/Compactors • Forklifts • Bridges • Robotics • Wind Turbines • Elevators • Moving Stairs • Doors • Dock Locks/Levelers • Aerial Lifts • Cranes • Conveyors • Rail • Shipboards • Dock Side



MICRO SWITCH pushbutton switches: Lit or unlit. Wide range of electrical and display design, pushbuttons and manual switches. Many shapes, sizes and configurations. Easy to apply, operate and maintain.
May be used in: Control Boards and Panels • Industrial and Test Equipment • Flight Decks • Medical Instrumentation • Process Control



MICRO SWITCH sealed and standard rocker switches: Wide range of electrical and display design. Many shapes, sizes, buttons and configurations to enhance manual operation.
May be used in: Transportation • Agricultural and Construction Equipment • Test Equipment • Heavy-Duty Machinery • Marine Equipment • Small Appliances • Telecom • Medical Instrumentation • Commercial Aviation

SAFETY SWITCHES



MICRO SWITCH safety switches: For operator point-of-operation protection, access detection, presence sensing, gate monitoring and electrical interfacing. High-quality, dependable, cost-effective solutions.
May be used in: Packaging and Semi-Conductor Equipment • Plastic-Molding Machinery • Machine Tools • Textile Machines • Lifts • Industrial Doors • Balers • Compactors • Aircraft Bridges • Telescopic Handlers • Refuse Vehicles

Warranty/Remedy

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items that Honeywell, in its sole discretion, finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While Honeywell may provide application assistance personally, through our literature and the Honeywell web site, it is customer's sole responsibility to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this writing. However, Honeywell assumes no responsibility for its use.

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To learn more about Honeywell's sensing and switch products, call **+1-815-235-6847**, email inquiries to **info.sc@honeywell.com**, or visit **sensing.honeywell.com**

Honeywell Sensing and Internet of Things

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